Contents Volume 45 (1991)

Special Issue

HONDURAS – A GEOTHERMAL INVESTIGATION
edited by Fraser Goff

Introduction viii
Recent geothermal investigations in Honduras: an overview
A.W. Laughlin and S.J. Goff (Los Alamos, N.M., U.S.A.) 1
Regional gravity investigation of Honduras, Central America
M.E. Ander (Los Alamos, N.M., U.S.A.), C.L.V. Aiken (Richardson, Texas, U.S.A.) and M.F. de la Fuente (Mexico, D.F., Mexico) 11
Noble gases from Honduras geothermal sites
B.M. Kennedy, H. Hiyagon and J.H. Reynolds (Berkeley, Calif., U.S.A.) 29
Geology of the Platanares geothermal area, Departamento de Copán, Honduras
G. Heiken (Los Alamos, N.M., U.S.A.), N. Ramos (Tegucigalpa, Honduras), W. Duffield (Flagstaff, Ariz., U.S.A.), J. Musgrave (Los Alamos, N.M., U.S.A.), K. Wohletz (Los Alamos, N.M., U.S.A.), S. Priest (Flagstaff, Ariz., U.S.A.), J. Aldrich (Los Alamos, N.M., U.S.A.), W. Flores (Tegucigalpa, Honduras), A. Ritchie (Charleston, S.C., U.S.A.), F. Goff and D. Eppler (Los Alamos, N.M., U.S.A.) and C. Escobar (Tegucigalpa, Honduras) 41
Structural geology and stress history of the Platanares geothermal site, Honduras: implications on the tectonics of the northwestern Caribbean plate boundary
M.J. Aldrich, Jr. and A.I. Adams (Los Alamos, N.M., U.S.A.) and C. Escobar (Tegucigalpa, Honduras) 59
Geophysical investigations of the Platanares geothermal site, Honduras, Central America
C.L. Aiken (Richardson, Texas, U.S.A.), M.E. Ander (Los Alamos, N.M., U.S.A.) and M.F. de la Fuente (Mexico, D.F., Mexico) 71
Heat flow at the Platanares, Honduras, geothermal site
J.G. Meert (Ann Arbor, Mich., U.S.A.) and D.L. Smith (Gainesville, Fla., U.S.A.) 91
Exploration drilling and reservoir model of the Platanares geothermal system, Honduras, Central America
F. Goff, S.J. Goff, S. Kelkar and L. Shevenell (Los Alamos, N.M., U.S.A.), A.H. Truesdell (Menlo Park, Calif., U.S.A.), J. Musgrave (Los Alamos, U.S.A.), H. Rüfenacht (Guatamala City, Guatamala) and W. Flores (Tegucigalpa, Honduras) 101
A geochemical model of the Platanares geothermal system, Honduras
C.J. Janik and A.H. Truesdell (Menlo Park, Calif., U.S.A.), F. Goff and L. Shevenell (Los Alamos, N.M., U.S.A.), M.L. Stallard (Menlo Park, Calif., U.S.A.), P.E. Trujillo and D. Counce (Los Alamos, N.M., U.S.A.) 125
Fluid inclusions and preliminary studies of hydrothermal alteration in core hole PLTG-1, Platanares geothermal area, Honduras
K.E. Barger (Menlo Park, Calif., U.S.A.) 147

Research Papers

The mechanics of the Campi Flegrei resurgent caldera – a model
G. Luongo (Napoli, Italy), E. Cubellis (Napoli and Roma, Italy), F. Obrizzo and S.M. Petrazzuoli (Napoli, Italy) 161
Caldera-like structures related to Permo-Carboniferous volcanism of the Catalan Pyrenees (NE Spain)
J. Martí (Barcelona, Spain) 173
Pattern recognition applied to volcanic activity: Identification of the precursory patterns to Etna recent flank eruptions and periods of rest
F. Mulargia, P. Gasperini and W. Marzocchi (Bologna, Italy) 187
Fractal analysis of eruptive activity of some basaltic volcanoes
J. Dubois and J.L. Cheminée (Paris, France) 197

Eruptive and magmatic cycles at Fuego de Colima volcano (Mexico)
C. Robin, G. Camus and A. Gourgaud (Clermont-Ferrand, France) 209
Fossil and active fumaroles in the 1912 eruptive deposits, Valley of Ten Thousand Smokes, Alaska
T.E.C. Keith (Menlo Park, Calif., USA) 227
Mt. Natib, Philippines: a geochemical model of a caldera-hosted geothermal system
J.R. Ruaya and C.C. Panem (Manila, Philippines) 225
The geochemistry of basalts from the Wallis Islands, Northern Melanesian Borderland: Evidence for a lithospheric origin for Samoan-type basaltic magmas?
R.C. Price (Bundoora, Vic., Australia), P. Maillet (Bundoora, Vic., Australia and Noumea, Nouvelle Caledonie), I. McDougall (Canberra, ACT, Australie) and J. Dupont (Noumea, Nouvelle Caledonie) ... 267
Immiscibility synthesis as an indication of cooling rates of basalts
B. Martin (Paris, France) and I. Kushiro (Tokyo, Japan) 289
CO_2-rich gases from Lakes Nyos and Monoun, Cameroon; Laacher See, Germany; Dieng, Indonesia: and Mt. Gambier, Australia – variations on a common theme
W.F. Giggenbach (Petone, New Zealand), Y. Sano (Tokyo, Japan) and H.U. Schmincke (Bochum, Germany) 311
Chemical variations in fumarolic gases at Vulcano Island (Southern Italy): seasonal and volcanic effects
D. Tedesco (Napoli, Italy and Gif sur Yvette, France), J.P. Toutain (Napoli, Italy and La Plaine des Cafres, France), P. Allard (Gif sur Yvette, France) and R. Losno (Paris, France) 325

Discussion
The growth rate of submarine volcanoes on the South Honshu and East Mariana ridges
* Comments – M.C. Jackson and P. Fryer (Honolulu, Hawai, USA) 335
* Reply – N.C. Smoot (Picayune, MS, USA) 341

Letter Section
Buoyant, superbuoyant and collapsing eruptions columns
M.I. Bursik (Pasadena, Calif., USA) and A.W. Woods (La Jolla, Calif., USA) 347